



2622  
#

Attorney Docket No. 49,761 (70868)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	H. Tanaka, et al.	CONFIRMATION NO.	8668
U.S.S.N.:	09/618,537	EXAMINER:	Park, C.
FILED:	July 18, 2000	GROUP:	2622
FOR:	IMAGE PROCESSING APPARATUS		

#9  
TL  
3-25-04

.....  
**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 17, 2004.

By Kathryn A. Grindrod  
Kathryn A. Grindrod

.....  
COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

RECEIVED

MAR 23 2004

Sir:

Technology Center 2600

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. **LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION**

The patents, publications or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

03/22/2004 WASFAW1 00000097 09618537

01 FC:1806

180.00 0P

II. COPIES

- a. X Submitted herewith is a legible copy of (i) each U.S and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- b. \_\_\_\_\_ This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application Serial No. \_\_\_\_\_, filed on \_\_\_\_\_. The following references were submitted to, and/or cited by, the Office in the prior application (s) and, therefore, are not required to be provided in this application.

III. CONCISE EXPLANATION OF THE RELEVANCE  
(check at least one box)

- a. X Except as may be indicated below in (b), all of the patents, publications or other information are in the English language or were cited in an English language Search Report, a copy of which is attached hereto (concise explanation not required).
- b. X A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:

English language abstract for references BB-BF are provided. In reference BC, an image processing apparatus is disclosed, which comprising: a selector as switching means; a variable-magnification timing circuit for switching the selector; a data interpolation circuit for carrying out enlarging or reduction processing of image data; and two line memories. In the image processing apparatus, when an enlargement processing of image data is carried out, the selector is switched so that the image data is inputted in the data interpolation circuit after the image data is inputted in the line memory. Furthermore, when a reduction processing of image data is carried out, the selector is switched so that the image data is inputted in the line memory after the image data is inputted in the data interpolation circuit. During image enlargement, an input of data to an interpolation circuit 12 is intermittently carried out while maintaining an original pixel data in the data interpolation circuit. In addition, during image reduction, write processing of data from the data interpolation circuit to the line memory intermittently carried out while maintaining the original pixel data in the data interpolation circuit.

References BE and BF disclose the following: during enlargement of image data, the data is corrected when the data is read from the line memory, and during reduction of image data, the data is corrected when the data is written in the memory line.

Reference BB discloses the following: a recording apparatus comprising a FIFO memory configured with two buffers having memory capacity storing greater than or equal to one line of image data of 300 dpi, and the same data is read twice when an image data of 300 dpi is converted to an image data of 600 dpi.

Reference BC discloses the following: a full-color sensor (CCD) 34 carries out color separation of one line of optical information from an original, and output R/G/B electric signals with resolution of 400 dpi; in 100 dpi mode, an input signal is thinned out into quarter in accordance with a supply of a quarter pixel clock (i.e. four times cycle clock of a pixel clock) to a serial parallel conversion circuit 310 and each of sixteen image signals is compiled into one; and in 200 dpi mode, an input signal is thinned out into half in accordance with a supply of a half image clock and each of sixteen image signals is compiled into one.

The following is a comparison between the present invention (as amended) and the cited references.

Claim 1 (as amended) recites a FIFO memory for carrying out write/read processing of image data; an enlarging variable magnification unit for carrying out variable-magnification (enlargement) processing following read processing of image data from the FIFO memory; and an reducing variable magnification unit for carrying out variable-magnification (reduction) processing following write processing of image data to the FIFO memory. In contrast, references BB to BF do not disclose, mention or suggest the foregoing constitution.

For example, reference BC discloses that during enlargement of image data, a line memory is placed to a pre-stage of a data interpolation circuit; and during reduction of image data, a line memory is placed to a subsequent-stage of the data interpolation circuit. A similar constitution is also disclosed in the remaining references. However, according to such a constitution, a plurality of selectors must be switched in a variable magnification timing circuit in order to switch a signal path. As a result, additional constitution for switching the signal path shall be required, and the signal path would be complicated. Furthermore, since the data interpolation circuit carries out enlargement processing and

reduction processing, an instruction for switching processing to the data interpolation circuit is required between switching of processings.

With the invention as claimed, the above constitution is not required, and the signal path can be more simplified. As a result, it becomes possible to reduce the area of a circuit board, and to reduce the amount of delay in signal transmission. Furthermore, since the enlarging variable magnification unit only carry out enlargement processing of image data, and reducing variable magnification unit only carry out reduction processing of image data, there is no need to switch a processing like a variable magnification unit which carries out both an enlargement processing and a reduction processing, as a result, the speed for processing is improved. Accordingly, it becomes possible to realize reduction in circuit board area, reduction in power consumption, reduction in cost and faster processing.

Claim 9 (newly added) recites a plurality of image forming means, and a plurality of switching means for switching a plurality of output lines connecting the FIFO memory and the plurality of image forming means. In contrast, references BB to BF do not disclose, mention or suggest the foregoing constitution, i.e., a constitution for transmitting image data from a line memory to a plurality of image forming means and forming an enlarged image, and a short time image forming according to the foregoing constitution. Therefore, references BB to BF individually or collectively cannot obtain the constitution of the invention as claimed.

- c.   X   The following additional information is provided for the Examiner's consideration:

The documents cited and provided herewith were cited in a Japan Patent Office Office Action mailed October 28, 2003 in an application corresponding to this application.

**FEES**

IV. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b)  
(check one box)

- a.        within three months of the filing date of a national application (37 C.F.R. § 1.97(b) (1). No fee or certification is required.

- b. \_\_\_\_\_ within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b) (2)). No fee or certification is required.
- c. \_\_\_\_\_ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b) (3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below, or, if no certification has been made, charge our deposit account a fee in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p).

V. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):  
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c) (1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c) (2)).

- a. X No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. §1.17(p).
- or
- b. \_\_\_\_\_ See the certification below. No fee is required.

VI. STATEMENT UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby states that

- a. \_\_\_\_\_ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. \_\_\_\_\_ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

- c. \_\_\_\_\_ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.


\_\_\_\_\_ Please charge Deposit Account No. 04-1105 in the amount of \$240.00 for the above-indicated fee. A triplicate copy of this paper is attached.

\_\_\_\_\_ No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule, with a petition if necessary, and charge the appropriate fee to Deposit Account No. **04-1105**.

Respectfully submitted,

Date: March 17, 2004

  
George W. Hartnell, III  
Reg. No. 42,639  
Attorney for Applicant(s)  
EDWARDS & ANGELL, LLP  
P.O. Box 55874  
Boston, MA 02205  
Customer No: 21874  
Tel: (617) 517-5523